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ENVIRONMENTAL ASSESSMENT
Montana Department of Fish, Wildlife & Parks
Kleinschmidt Creek Fish Habitat Restoration Project

General Purpose: This proposed project will reconstruct 5,300 feet of stream channel, restore fish habitat and restore 24.2 riparian/wetland acres on Kleinschmidt Creek, a spring creek located near the town of Ovando. The project will supplement additional planned restoration efforts, located immediately downstream, that also includes restoring channel dimensions and fish habitat on a 2,500 foot section of channel. The two combined projects will provide for a comprehensive restoration effort for the spring creek system. This project includes restoration of a functional riparian/wetland area. Restricting livestock grazing and enrolling the landowner in a perpetual conservation easement will assist in protecting the restored riparian corridor.

Location of Project:

This project will be conducted on Kleinschmidt Creek near the town of Ovando within Township 14 North, Range 11 West, Section 5 and 8 in Powell County.

II. Need for the Project:

This is a cooperative multi-agency private-lands mitigation effort that will restore fish and wildlife resources to a degraded spring creek. Agencies and conservation groups participating in this effort include: Montana Fish, Wildlife & Parks (FWP), the Montana Department of Transportation (MDT), U.S. Fish & Wildlife Service (FWS), and groups such as the Big Blackfoot Chapter of Trout Unlimited and the Blackfoot Challenge. The FWS is providing the funds to secure a 270-acre conservation easement that will remain in perpetuity to protect the restored riparian corridor of Kleinschmidt Creek as well as a portion of the surrounding upland. The Montana Department of Transportation (MDT) will provide a majority of the construction funding to this project based on MDT′ s need to secure compensatory wetland mitigation credits for anticipated highway construction impacts within Montana Watershed #2-Upper Clark=s Fork River Basin.

Historically, the project area was known as the Smith Ranch. Howard Copenhaver, a valley resident since the 1940's, described the condition of Kleinschmidt Creek during his childhood as having continuous dense willows lining the creek. He recalled catching large bull trout in the creek.

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Over the past several decades, Kleinschmidt Creek has been straightened by Highway 200, altered by a series of rock dams and has been intensively grazed. As a consequence, Kleinschmidt Creek is in severely degraded condition. Today, fish habitat is minimal in Kleinschmidt Creek; willows and the native fishery are essentially absent. Fish population sampling undertaken in 1998 reported low species richness, low densities of non-native salmonids (brook trout and brown trout present), very low densities of large fish and no native salmonids (westslope cutthroat trout and bull trout). Despite the degraded conditions of the channel and the poor condition of the fishery, the fundamental conditions exist for Kleinschmidt creek to provide for high quality habitat for fish. These conditions are a gravel channel bottom, stable streamflow, and relatively constant and cool water temperatures.

Kleinschmidt Creek is also a whirling disease positive stream, infecting juvenile fish in the lower reaches of the North Fork Blackfoot River and Blackfoot River downstream of the Kleinschmidt Creek confluence. Whirling disease-related investigations undertaken by the Montana State University and Montana Fish, Wildlife and Parks indicate the degraded condition of the stream contributes to elevated whirling disease infection levels in fish. The restoration project is expected to moderate the effects of whirling disease by: 1) improving macroinvertebrate richness thereby increase competition and predation on *T. Tubifex*; 2) eliminating channel conditions that led to heavy accumulations of organic sediments; and 3) significantly reducing stream temperatures.

Past livestock use within the proposed project area has removed most of the woody riparian vegetation and has resulted in the trampling of the stream banks causing an over widened and shallow channel. Currently, the degraded condition of the channel provides poor habitat for fish. Kleinschmidt Creek is a tributary to the North Fork of the Blackfoot River and restoration of this reach of stream would restore spawning and rearing habitat that would be expected to be used by trout residing both in the stream and in the river. This project will restore health of riparian and aquatic habitats and directly benefit fish populations and riparian-dependent wildlife species including bald eagles, which use the stream as a wintering area. This project will directly improve habitat conditions for bull trout and westslope cutthroat trout. Bull trout is a "threatened" species under the Endangered Species Act, and westslope cutthroat trout a "species of special concern" in Montana.

III. Scope of the Project:

The project calls for channel restoration on approximately 5,300 feet of stream, and would include constructing a more narrow and deep channel and building point bars to increase channel sinuosity consistent with and E4 Rosgen (1996) channel type. Newly created deep and narrow channel would provide holding water and cover for adult trout and would maintain lower instream sediment and lower stream temperatures than currently exist. Additional improvements would include the placement of wood on meander bend (rootwads, wood veins, footer logs) for bank stability and cover, trans-planting mature willow clumps, planting other shrubs within the riparian zone, and placing sod mats on newly excavated stream banks. In addition, wetland areas will be created within those portions of the old stream channel that are filled in to construct the new channel meanders and from borrow sites along the riparian corridor. Necessary livestock

management changes will be implemented in the project area. Livestock managment changes to improve riparian area upstream of the project area will be addressed through future cooperative efforts.

IV Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment:

1. Terrestrial and aquatic life and habitats

Removing the perturbations of livestock grazing within the riparian zone and constructing a more narrow, sinuous and deep channel is expected to create a more diverse and healthy habitat for aquatic life. Expected improvements in aquatic habitat should enhance resident trout populations, increase the recruitment of trout to the North Fork of the Blackfoot River and serve as thermal refuge for Blackfoot River native fish. Native salmonids have not been recorded in the stream in recent sampling. Riparian dependent wildlife would also be improved through the restoration of the riparian vegetative community. By reducing organic sediments, reducing stream temperatures and restoring stream biota, the project is expected to not only reduce habitat for *T. Tubifex* but also increase competition and predation on *T. Tubifex*. Reducing stream temperatures may also reduce Triactinomyxon production according to whirling disease experts in Montana.

2. Water quantity, quality and distribution

Short-term increases in turbidity will occur during project construction although a strong effort will be made to control coarse sediment transport. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. A temporary-settling pond at the lower portion of the project will be constructed and used in combination with sediment filter mats. Permits obtained for this project will include 1) a 303a short term exemption from turbidity will be obtained from the Water Quality Bureau, 2) a 310 permit will be obtained from the local Conservation District, and 3) a 404 permit obtained from the Army Corps of Engineers. The project includes removing the perturbations of livestock grazing from within the riparian zone and restoring the riparian vegetative community would reduce the sediment contribution to downstream areas, thereby improving the overall quality of downstream waters.

3. Geology and soil quality, stability and moisture

No effects on geology and soils are expected above the high water mark. Below the high water mark, the project is expected to create a more stable stream channel. Sediment removed from the channel would be placed on newly created point bars and re-vegetated to create riparian scrub/shrub and emergent wetland areas.

4. Vegetation cover, quantity and quality

Riparian vegetation and cover would be improved by stabilizing the stream channel and by extensive revegetation efforts through planting of native trees, shrubs and grasses. It is anticipated that such woody species of shrubs and trees such as various willow species, alders, cottonwoods and red-osier dogwood (see enclosed document: *Kleinschmidt Creek: Site assessment and summary of impacts of proposed stream restoration*. Marler 1998).

5. Aesthetics

Restoring a degraded reach of stream to a healthy and more natural stream environment would enhance aesthetics. The stream reach would be restored by using channel dimensions similar to those obtained from an undisturbed reach of stream and by re-establishing a healthy riparian vegetative community.

7. Unique, endangered, fragile, or limited environmental resources

Bull trout a "threatened" species under the Endangered Species Act and westslope cutthroat trout an "species of special concern" in Montana both inhabit the North Fork Blackfoot River. However, fish sampling in 1998 in the Kleinschmidt Creek did not record the presence of these species. We anticipate no direct short or long-term impacts to these species resulting from the project but rather direct long-term benefits resulting from the project. For bull trout Section 6 ESA consultation will occur however prior to the project. The benefits include restoring potential spawning and rearing areas, and restoring thermal refuge for both species. Other species found in the general area which may fall into this category include bald eagle, grizzly bear, common loon, black tern and Columbian sharptailed grouse. With the exception of the bald eagle, the project area does not provide habitat or potential habitat for the remaining species. The bald eagle uses the project area as a wintering area. This project, which will be completed during the summer months is expected to benefit the bald eagle over the long-term by restoring the fish population. Therefore, as the Kleinschmidt Creek project is currently designed, it is **"Not Likely to Adversely Affect"** any endangered species found within the general area of the project (see enclosed document: *Kleinschmidt Creek: Site assessment and summary of impacts of proposed stream restoration*. Marler 1998).

9. Historic and archaeological sites

The proposed project will likely require an individual Army Corp of Engineers (COE) 404 permit. Therefore, an archaeologist with the Montana Department of Transportation will survey the project area and ensure compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment:

7. Access to & quality of recreational activities

It is anticipated that restoration of this reach of Kleinschmidt Creek would improve spawning and rearing habitat and, as a result, would provide greater recruitment to the North Fork of the Blackfoot River. The recreational fishery in Kleinschmidt Creek and the North Fork of the Blackfoot River would be improved because of improved habitat and increased recruitment.

VII. Discussion and Evaluation of Reasonable Alternatives:

1. No Action Alternative

If no action is taken, this reach of Kleinschmidt Creek will remain degraded, fish populations will remain low and recruitment to the North Fork of the Blackfoot River will remain marginal. In addition, habitat for riparian dependent wildlife will remain in a degraded condition due to overgrazing by livestock along the stream corridor. Recreational opportunities associated with fish and wildlife resources will remain reduced and aesthetics will continue to be impaired. Whirling disease resulting from the degraded stream environment will continue to impact Blackfoot River fisheries downstream of the Kleinschmidt Creek confluence.

2. The Proposed Alternative

The proposed alternative is designed to remove perturbations resulting from highway channelization, rock dams and livestock grazing within the riparian zone, construct a more narrow, sinuous and deep stream channel and enhance salmonid habitat. These activities would restore the riparian vegetative community and create more diverse habitat for aquatic life and riparian dependent wildlife. This alternative would improve fish and wildlife habitat, improve aesthetics, improve water quality, moderate the effects of whirling disease, and increase recruitment of salmonids to the North Fork of the Blackfoot River.

VIII. Environmental Assessment Conclusion Section:

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. **Level of public involvement**

The proposed project was reviewed and supported by the public agencies including the Montana Fish, Wildlife and Parks, U. S. Fish and Wildlife Service, the North Powell Conservation District, Montana Department of Transportation and the Big Blackfoot Chapter of Trout Unlimited. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on the Montana Electronic Bulletin Board.

3. **Duration of comment period?** 30 Days

Public comment will be accepted through 5 P.M. on April 15, 1999.

4. **Persons responsible for preparing the EA document.**

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ENVIRONMENTAL ASSESSMENT

Project Title: Kleinschmidt Creek Fish Habitat and Wetland Restoration Project

Division/Bureau: Montana Dept. of Fish, Wildlife & Parks

Description of Project: The project is being proposed to restore stream channel dimensions, restore degraded wetlands and create fish habitat on a 5,300 foot degraded reach of Kleinschmidt Creek, a spring creek located near the town of Ovando.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction: North Powell Conservation District, USFWS, Army Corp of Engineers, Department of Environmental Quality

Individuals or groups contributing to this EA: Land and Water Consulting, Inc., Montana Fish, Wildlife and Parks, Montana Natural Heritage Program and Marilyn Marler, consultant for the U.S. Fish & Wildlife Service, U.S Fish and Wildlife Service

Recommendation concerning preparation of EIS: No EIS required.
EA prepared by: Ron Pierce of FWP
Date: March 12, 1999

Kleinschmidt Creek: Site assessment and summary of impacts of proposed stream restoration

Prepared by
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October 19, 1998

Summary:

A cooperative stream restoration project has been proposed for 1.1 miles of Kleinschmidt Creek with the goal of creating habitat for native fish, especially cutthroat and bull trout. The primary source of degradation to Kleinschmidt Creek is overgrazing of the riparian area, resulting in loss of sinuosity, dramatic over widening of the stream, and loss of bank stabilizing shrubs. The main plant community type currently in the project area is Nebraska sedge/Baltic rush. It is likely that a willow/sedge community type, for example, Yellow willow/beaked sedge, historically dominated this area. However conditions are so degraded at the site, it is impossible to characterize the historic conditions accurately.

The total assessment area is 23.3 acres, evaluated as a Category 3 wetland (receiving 56% of possible points).

The proposed project will:

- Restore 8.6 acres of severely degraded wetlands
- Enhance 3.7 acres of marginally functioning wetland and upland area (with the possibility of creating wetlands within a portion of the enhanced area)
- Preserve 6.1 acres of emergent wetland in the Upper Reach, adjacent to the project
- 4.9 acres of emergent wetland in the Lower Reach will continue to be preserved, although steps to ensure this have already been taken by the landowner *prior to this project*

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1.0 Introduction

The US Fish and Wildlife Service, Montana Department of Fish, Wildlife and Parks (MTFWP), and private landowner Tom Rue have proposed a cooperative restoration project for Kleinschmidt Creek, a tributary to the North Fork Blackfoot River. The primary objective of the project is to renaturalize the stream channel, in order to create habitat for native fish, especially bull trout (a federally listed threatened species) and westslope cutthroat trout (a candidate for listing). Currently Kleinschmidt Creek is degraded and supports only low densities of exotic fish.

Essentially, the proposed work will:

- Narrow and deepen the existing channel
- Lengthen the existing stream by increasing sinuosity
- Revegetate stream banks

Benefits of this work are expected to include:

- Improved habitat for native fish of special concern
- Long-term improvements to the North Fork fishery
- Restoration of native plant communities, and increased plant species diversity on site

This report describes current conditions of the project area, and the impacts of the project to the site in terms of mitigation credits. I used the Montana Wetland Field Evaluation Form to assess the proposed project area and aerial photographs to map current site conditions.

2.0 Site description

2.1 Legal and land use

The project area lies entirely on the private property of Tom Rue (T14 N R 11 W sec 5). The assessment area (AA) is 23.3 acres, and is a riparian zone that was historically used for grazing livestock (see maps).

The proposed channel restoration work is on two sections of the stream, referred to here, and in the design proposal prepared by Land and Water Consulting, Inc., as the Upper Reach (12.9 acres, Map 1) and the Lower Reach (10.4 acres, Map 2). The section of stream between these reaches was restored in 1997 (Map 2, area 4); this section of the property is not included in the AA for this report. Grazing no longer occurs on the Lower Reach or restored section, but 3 horses are currently pastured along the Upper Reach. There are many springs and seeps in the AA, which contribute significantly to the flow of Kleinschmidt Creek (Figure 1). Agricultural fields and a private residence border the AA.

2.2 Site Assessment [Montana wetland field evaluation form, (MDT 1996)]

On October 14, 1998, an evaluation form was completed for each reach of the project area. The AA includes three classes of wetland: Riverine/Lower perennial/Unconsolidated bottom, Riverine/ Lower perennial/Emergent wetland, and Palustrine/Emergent wetland. There are also Upland areas in each reach (Appendix 1). Each of these is present in both the Upper and Lower Reaches. Assessment scores were similar for the Upper and Lower Reaches. Both were evaluated as Category 3 Wetlands, and received 56% of the possible points.

The evaluation form is not final at the time this report was submitted since the Montana Natural Heritage Program is processing my data request for S1, S2, and S3 species habitat at the site (submitted October 14, 1998). This could raise the point total to a maximum of 60% if it has documented regular use by such species (score of 1, Item 15B). However the area is more likely to receive suspected/incidental use by such species (score of 0.1), which would decrease the point total to 52% of possible points.

Key points of the evaluation:

- General condition is directly disturbed (by decades of over grazing)
- Moderate for habitat diversity (this score was inflated by the presence of a perennial water source)
- Low as functional habitat for listed and candidate species. Bull trout and cutthroat trout are thought to have used Kleinschmidt Creek historically (prior to degradation)
- Low for general fish habitat
- Low for sediment/nutrient/toxicant retention and removal
- Moderate for sediment and shoreline stabilization
- High for production export/ food chain support

    Note: this rating does not accurately portray the conditions at Kleinschmidt Creek. Current riparian vegetation (sedges), although present, cannot provide organic inputs at a rate comparable to the historic, functional riparian plant community (dense woody shrubs)
- Low for uniqueness (since degraded small streams are abundant in the Blackfoot Valley)
- Low for recreation/educational potential, since the site is currently not a known as an accessible recreation site, is directly disturbed, and is located on private property

2.3 Stream conditions

Kleinschmidt Creek above the project area, which has not been directly impacted by grazing, is a Rosgen E channel type (Rosgen 1996) with woody riparian vegetation (See Map 1, area 4). It is therefore reasonable to expect that within the project area, Kleinschmidt Creek was historically an E channel type. E channels are deep relative to their width (width to depth ratio is <12), have a gentle gradient (slope <2%), and are very sinuous (sinuosity >1.5). The project proposal by Land and Water Consulting indicates that currently, the project areas on Kleinschmidt Creek has width to depth ratio of 50-75, gradient 0.1%, and sinuosity of 1.1. **In other words, the creek is dramatically over widened, straightened, and often entrenched as a result of decades of grazing pressures (Figures 2 and 3).**

There are many small springs and seeps in the AA, which contribute to the flow of Kleinschmidt Creek; since it is spring fed, water temperatures remain relatively low and constant year round. As a functional spring creek with and E channel, is expected to provide high quality habitat for bull and cutthroat trout. Currently, the only use is by exotic trout species, in low densities (R. Pierce, MTFWP, personal communication).

2.3.1 Proposed work

The project design proposed by Land and Water Consulting will address the in stream problems by narrowing and deepening the channel, and creating stream meanders to increase sinuosity, and restoring woody riparian vegetation to Kleinschmidt Creek (Land and Water 1998). Their report to MTFWP details the project design.

2.4 Vegetation

2.4.1 Current vegetation

Plant cover in the both the Upper and Lower reaches are fairly homogenous, with riparian shrubs conspicuously absent. Both reaches have 3 plant communities: Nebraska sedge/Baltic rush, exotic plant cover, and peat mats. Additionally, the Lower Reach has seasonally dry areas with high proportion of tufted hair grass co-dominant with sedges (Area 1b, Map 2).

2.4.1.1 Nebraska sedge community type (Area 1, both maps)

This community type is described by Hansen et al. (1995). The Nebraska sedge (*Carex nebrascensis*) community dominates stream banks (Riverine/LP) and adjacent areas (Palustrine/LP) throughout the AA. Sartwell sedge (*Carex sartwellii)* and Baltic rush (*Juncus balticus)* as common in this community. In a few places Baltic rush dominates, but Nebraska sedge is still well represented.

The Nebraska sedge community type is a grazing disclimax successional type; that is, it indicates heavy grazing at the site and an alteration from the former climax dominants (Hansen et al. 1985). This community type extends from the stream bank to edge of the AA, currently occupying approximately 9.5 acres. There are very few trees or shrubs in the project area, although a few, small (< 0.25 m tall) shrubby cinquefoil (*Potentilla fruticosa*) shrubs were found in the found in the Lower Reach. Vegetation in the lower reach appears less impacted by grazing and tufted hair grass (*Deschampsia caespitosa*) is common along the north bank in soils that are seasonally dry (Area 1b, Map 2).

2.4.1.2 Exotic plant cover type (Area 2, both maps)

Several undesirable, exotic plants occur in the AA, although at this time they are fairly localized and do not dominate the AA. These include Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), ox-eye *daisy (Chrysanthemum leucanthemum*) and spotted knapweed (*Centaurea maculosa*), and are most common on the south side of the property (closest to the highway) and along the second fenceline in the lower reach.

Reed canary grass (*Phalaris arundinaceae*) is also common in the project area, and appears to be spreading. This native grass has deep roots and is palatable to ungulates during the growing season. However it is undesirable because under disturbed conditions, it grows in such dense stands that overall plant species diversity is drastically decreased.

2.4.1.3 Peat mats (Area 3, both maps)

There are a few small areas (<1 acre total) around springs that are floating, relict peat soils (indicated on the map). Such soil mats develop extremely slowly, and are not uncommon in areas of springs and low gradient (Hansen et al. 1995). Within this AA, peat mats seemed to have higher diversity than surrounding areas, and had a much higher proportion of sphagnum moss. Dominant vascular plants included willow herb (*Epilobium glaberrimum)*, speedwells (*Veronica* spp.), and sword-leaf rush (*Juncus ensifolius*). These peat soils should be preserved during any channel restoration work at this site.

2.4.2 Historic vegetation

The historic riparian area of the AA was probably a shrub/sedge community type. Because of the current severely degraded conditions, it is not possible to know to the exact community type, but probable examples are the yellow willow/beaked sedge type or Geyer's willow/beaked sedge type, as described by Hansen et al. (1995). Immediately upstream of the project area and around the buildings located in between the Upper and Lower Reaches, there are mature yellow willows (*Salix lutea)* along the banks. At the lower end of the project area, there is a stand of water birch (*Betula occidentalis*). These shrubs, as well as hawthorn (*Cretageous* spp.), dogwood (*Cornus stolonifera*), and other willows (*Salix* spp., including *S. bebbiana, S. boothii* and *S. geyeriana)* which are common riparian species of small creeks in western Montana, were probably important components of the riparian community. Riparian sites near the Rue property have mature spruce stands; this suggests that the AA may have supported a spruce/dogwood community type (as described by Hansen et al. 1995- common in areas with very high water tables) if undisturbed for a long enough period of time. Since this is a late seral community type, it is not a feasible restoration goal.

There are several sedge species that may have been dominant, including but not limited to *Carex lasiocarpa*, *C. rostrata* and *C. vesicaria*. It is likely that the historic vegetation of the area was more diverse in terms of both community types and number of plant species. Palustrine emergent wetlands in the AA were probably sedge-dominated with a less developed shrub component than the riparian zone. There is also a possibility that the peat soils still present in the AA were once more widely distributed over the study area.

Any of the native plants mentioned here should be used for revegetation, as they are well adapted to permanently inundated conditions, and most are either easily propagated or commercially available (Bentrup and Hoag 1998).

Riparian shrubs are the most conspicuously absent component of the entire AA, and their absence contributes to the lack of fish habitat in Kleinschmidt Creek, and the lack of emergent plant diversity. Woody riparian vegetation has several crucial functions for riverine systems, including:

- Input of detritus for food chain support
- Input of large woody debris for aquatic habitat complexity
- Provide cover for stream; serves to regulate water temperature and provide hiding cover for fish
- Stabilize stream banks
- Habitat for nesting and non-aquatic birds

2.4.2 Vegetation within the restored reach

While assessing the project area, I observed the plants in the restored section of Kleinschmidt Creek. It is notable that the plant species diversity was higher in this section, and included more plant habitat diversity due to the creation of filled areas that hold standing water. Such areas contained several plants not observed anywhere in the assessment area, including monkey flower (*Mimulus guttatis*), the carnivorous common bladderwort (*Utricularia vulgaris*), hardstem spike rush (*Scirpus acutus*) and American brooklime speedwell (*Veronica americana.).*

The restored section still lacks significant cover by shrubs. The current proposal includes substantially more effort and resources for shrub revegetation efforts.

3.0 Impacts to wetlands acreage

The proposed work will restore 8.6 acres of severely degraded wetlands, enhance 3.7 acres (with the possibility of creating wetlands within a portion of the enhanced area), and preserve 6.1 acres of emergent wetland in the Upper Reach, adjacent to the project. Additionally, 4.9 acres of emergent wetland in the Lower Reach will continue to be preserved, although steps to ensure this have already been taken by the landowner *prior to this project*.

The details of how this will occur are summarized in the following table.

Table 1. Impacts of proposed project to assessment area.

	Map symbol	**Acres**	**Impact of proposed work to wetlands**	**Method**
Upper Reach (2650')	Map 1	12.9		
Open water	N/A	4.1	Restoration	Fill parts of stream (narrow and create meanders) and vegetate filled areas with shrubs and sedges
Adjacent emergent wetland - Nebraska sedge - Peat mats - Existing stream banks (1.2 acres)	- 1 - 3 - 1	7.3	- Preservation - Preservation - Restoration	- Remove horses - Remove horses - Vegetate with native shrubs
Adjacent low-functioning areas (Exotic dominated upland)	2	1.5	Creation or enhancement	Create by using as borrow sites for fill material (depressions will hold water seasonally), or enhance by planting native species
Lower Reach (2362')	Map 2	10.4		
Open water	N/A	2.2	Restoration	Fill parts of stream (narrow and create meanders) and vegetate filled areas with shrubs and sedges
Adjacent emergent wetland - Nebraska sedge - Peat mats - Existing stream banks (1.1 acres)	- 1 - 3 - 1	6.0	- Preservation - Preservation - Restoration	- N/A (livestock prev. excluded) - N/A (livestock prev. excluded) - Vegetate with native shrubs
Adjacent low-functioning areas (Exotic dominated upland)	2	2.2	Creation or enhancement	Create by using as borrow sites for fill material (depressions will hold water seasonally), or enhance by planting native species

4.0 References

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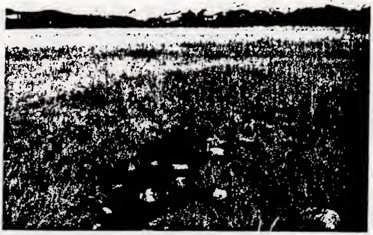


Figure 1. Kleinschmidt Creek is influenced by several springs within the project area.

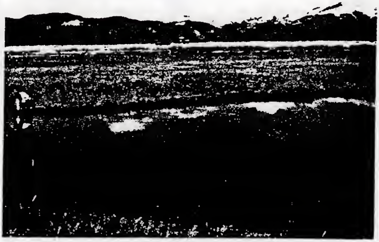


Figure 2. Decades of grazing pressure have resulted in loss of riparian shrubs, and over-widening of the stream channel.

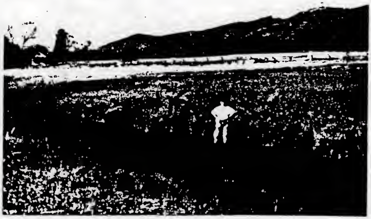


Figure 3. Channel is entrenched and straightened.

Legend for Site Maps

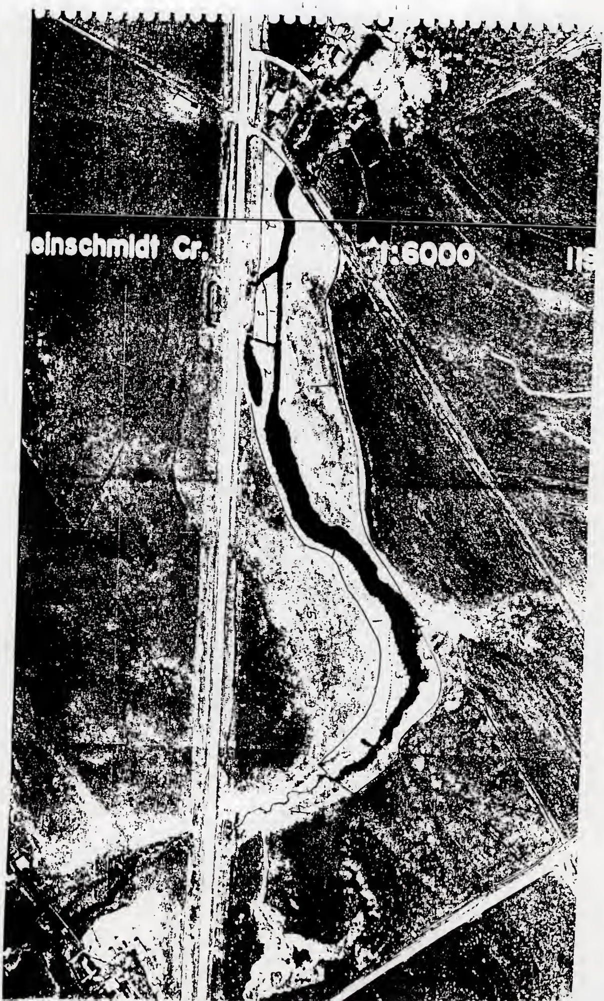
Aerial photos from 1990. Scale on enlargements is approximately 1:3000

Map 1. Upper Reach

1. Emergent wetlands- Nebraska sedge community type (with Baltic rush)
2. Upland areas- dominated by exotic plants
3. Peat mats
4. Intact portion of Kleinschmidt Creek (outside of project area)
5. Cultivated lands

Map 2. Lower Reach

1a. Emergent wetlands- Nebraska sedge community type (with Baltic rush)
1b. Emergent wetlands- Nebraska sedge community type (with tufted hair grass)
2. Upland areas- dominated by exotic plants
3. Peat mats
4. Previously restored section (completed 1997; outside of project area)
5. Cultivated lands



leinschmidt Cr.
1:6000
11
4
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2
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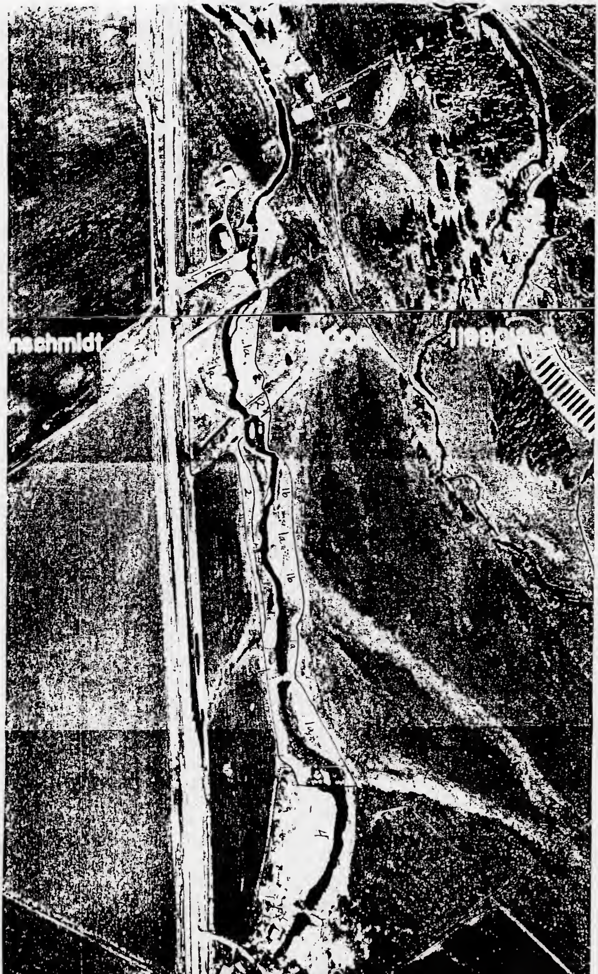
nschmidt
1198
1a
1a
2
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4

Appendix 1.

Completed Montana wetland field evaluation forms for the Upper and Lower Reaches.

Montana Wetland Field Evaluation Form (revised 9/23/1997, DRAFT)

1. **Project Name:** KleiWschmidt Creek Restoration Downstream Section **2. Project #:** ____ **& Control #:** ____

3. **Evaluation Date:** Mo. 10 Day 14 Yr. 96 **4. Evaluator(s):** C. Urban / S althof - MDT Marilyn Marlee - consultant USFWS **5. Wetlands/Site #(s)** Downstream end

6. **Wetland Location(s): I. Legal:** Twnshp. 14 [✓ N] & S; Range 11 E or [✓ W] Section 5 ; ¼ S. ____ ; ¼¼S. ____ ; ¼¼¼S. ____
II. Geographic: Latitude: Degrees ____ ; Min. ____ ; Sec. ____ ; Longitude: Degrees ____ Min. ____ ; Sec. ____
iii. UTM: _ _ _ _ _ _ **iv. Watershed:** 1 7 0 1 0 2 0 3 **GPS Reference No.:** ____
Access Description: Property owned by Mr Tom Rue. Access by permission only. Site is directly adjacent and to the north of US Highway 200 at milepost 50.8 to 51.3. Turnoff into Residential Driveway

7. a. **Evaluating Agency:** MDT / USFWS ;
b. **Purpose of Evaluation:**
1. ____ Wetlands potentially affected by MDT project
2. X Mitigation wetlands; pre-construction
3. ____ Mitigation wetlands; post-construction
4. ____ Other

8. **Wetland size:** (total acres) 4.0 (visually estimated)
____.__ (measured, e.g. by GPS)

9. **Assessment area:** (AA,tot., ac., see instructions on determining AA) 10.0 (visually estimated)
10.4 (measured, e.g. by GPS)

10. Classification of AA (HGM according to Brinson, first column; USFWS according to Cowardin[1979], remaining columns)

HGM Class	System	Subsyst	Class	Water Regime	Modifier	Dominance Type	% of AA
Riverine	Riverine	Lower Perennial	UB	Flooded Permanently	—	Potamogeton sp., Myriophyllum	23
Riverine	Riverine	Lower Perennial	EM	Flooded Permanently	—	Carex nebrascensis, Juncus balticus	15
Riverine	Palustrine	—	EM	Semi-permanently Flooded	—	Carex nebrascensis, Juncus balticus	42
(UPLAND)						Crested wheatgrass, bull thistle spotted knapweed, cropland	20

Abbreviations: System: Palustrine(P)/ Subsyst.: none/ Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), nergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)/ System: Lacustrine (L)/, Subsyst.: Limnetic (2)/ Classes: RB, UB, AB/ Subsystem: Littoral (4)/ Classes: RB, UB, AB, US, W System: Riverine (R)/ Subsyst.: Lower Perennial (2)/ Classes: RB, UB, AB, US, EM/ Subsystem: Upper Perennial (3)/ Classes: RB, UB, AB, US/
Vater Regimes: Intermittently Exposed (G), Semipermanently Flooded (F), Seasonally Flooded (C), Temporarily Flooded (A), Intermittently Flooded (J)

11. Estimate relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)
(Circle one) Unknown Rare Common [✓ Abundant]
Comments: At the lower end of the property, the stream takes on a riffle/run characteristics with few pools. This type of system is abundant throughout the valley

12. General condition of AA:
I. Regarding disturbance: (circle one, see definitions) Undisturbed Encroached Upon [✓ Directly Disturbed]
Comments: (types of disturbance, intensity, season, etc.): Heavy grazing + disturbance by livestock
II. Weedy, alien, & introduced species (including those not domesticated, feral): (list) Spotted Knapweed, Canada thistle, reed canary grass

13. Habitat Diversity: (count only the number of different "Cowardin" types occurring at level of water regime [equal NWI classes, #10 above])
I. Number of NWI classes w/ persistent vegetation: (circle points) ≥3 classes = 5 pts. 2 classes = 3 pts. ≤ 1class [✓ = 1 pt.]
II. Open water in the AA: (circle one) present [✓ = 2 pts.] absent = 1 pt.
Score is: (I 1) x (II 2) = 2

Score	10	5-8	[✓ 2-3]	1
Rating	Exceptional	High	[✓ Moderate]	Low
Functional Points	NA	NA	NA	NA

Comments: Although two different emergent systems are characterized within the AA, The vegetative dominants are the same, Therefore only 1 class.

14. Provide brief descriptive summary of AA & surrounding land use and habitat: The AA is a riparian corridor associated with Kleinschmidt's Spring Creek that is bordered by emergent wetlands, spring seeps and upland areas consisting of hayfields and livestock pastures. US Highway 200

Lower

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

15A. Habitat for Federally Listed, Proposed, or Candidate Threatened or Endangered Plants or Animals:

AA is Documented (D) or Suspected (S) to receive (circle one):

Regular use or is designated critical habitat (list species) D S
Occasional (infrequent, sporadic) use (list species) D S
Incidental (chance, inconsequential) use (list species) [✓ D] S Cutthroat Trout (westslope), Bull Trout, Bald eag
No use D [✓ S] Grizzly Bear

Highest Level Use:	doc./reg.	doc./occ.	sus./reg.	sus./occ.	[✓ doc./incid.]	sus./incid.	None
Rating	High	High	Moderate	Moderate	[✓ Low]	Low	None
Functional Points	1.0	0.8	0.7	0.6	[✓ 0.2]	0.1	0.0

Sources for documented use (e.g. observations, records, etc.) USFWS / MFWP personnel indicate that the Spring creek may be utilized by these fish at certain times of the year. Improvement of the stream corridor will increase the likelihood of these species inhabiting the stream year rou

15B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in 15A above)

AA is Documented (D) or Suspected (S) to receive (circle one):

Regular use (list species) D S
Occasional (infrequent, sporadic) use (list species) D S
Incidental (chance, inconsequential) use (list species) D [✓ S] Common loon, black tern, Hutchinsia procumbens, Colombian Sharptailed grouse
No use D S

Highest Level Use:	doc./reg.	doc./occ.	sus./reg.	sus./occ.	doc./incid.	[✓ sus./incid]	None
Rating	High	High	Moderate	Moderate	Low	[✓ Low]	None
Functional Points	1.0	0.8	0.7	0.6	0.2	[✓ 0.1]	0.0

Sources for documented use (e.g. observations, records, etc.) The MNHP identified several species utilizing areas to the east and south of the project area. It is unlikely that these species utilize this area except by chance. The Hutchinsia procumbens was not identified in plant surveys of site

15C. General Wildlife Habitat Rating: (Circle appropriate response; AA is verified [V] or suspected [S] to receive substantial [S] moderate [M], or negligible to no use [N]; [see definitions for these terms] by the listed wildlife groups (see definitions for aquatic/semi-aquatic & non-aquatic wildlife)

Aquatic/semi-aquatic birds (list examples)	[✓ V] or S	[✓ S], M, or N	mallard, wigeon, teal, bufflehead, pintail, Kingfisher
Non-aquatic birds (list examples)	V or [✓ S]	S, [✓ M] or N	American robin, magpie, blackbirds, Swallows
Aquatic/semi-aquatic mammals (list ex.)	[✓ V] or S	[✓ S] M, or N	muskrats
Non-aquatic mammals (list ex.)	V or [✓ S]	S, M, or [✓ N]	Deer, elk, coyote, fox ??
Aquatic/semi aquatic reptiles (list ex.)	V or S	S, M, or [✓ N]	none
Non-aquatic reptiles (list ex.)	V or S	S, M, or [✓ N]	NONE
Amphibians (list examples)	[✓ V] or S	S, [✓ M] or N	Leopard frog, Spotted frog
Invertebrates (list examples)	[✓ V] or S	[✓ S] M, or N	mayfly, caddis, snails, Annelid worms

i. Assessed Wildlife Use (circle points):
≥3 s's or ≥5 m's + s's [✓ = 7 pts.]
1-2 s's or 2-4 m's = 3 pts.
No s's and < 2 m's = 1 pt.

ii. Habitat Diversity from # 13 (circle points)
High to exceptional rating = 3 pts.
Moderate rating [✓ = 2 pts]
Low rating = 1 pt.

Score is: (i 7) x (ii 2) = 14

Score	21	[✓ 14]	9	7	[✓ 6]	3	2	1
Rating	High	[✓ High]	High	High	[✓ Mod.]	Mod.	Low	Low
Functional Points	1.0	[✓ 0.9]	0.8	0.7	[✓ 0.5]	0.4	0.3	0.1

Comments: Although the habitat rates out as high, the area is subjected to heavy grazing pressure by livestock. It should be rated as moderate for wildlife due to the lack of cover for terrestrial wildlife.

15D. General Fish Habitat Rating: (If AA does not contain, or is not connected to, a fish-bearing stream or standing water body [e.g. pond or lake], circle NA here and proceed to the next function)

i. AA is verified (V) or suspected (S) to support listed groups for portions of their life cycle (circle points)
Native fish V or S = 5 pts.
Introduced game fish [✓ V] or S [✓ = 3 pts.]
Introduced non-game fish V or S = 2 pts.
No fish V or S = 1 pt.

ii. Surface water in AA is (circle points):
Permanent/perennial [✓ = 3 pts]
Seasonal/intermittent = 2 pts.
Temporary/ephemeral = 1 pt.

Score is: (i 3) x (ii 3) = 9

Score	15	10	[✓ 9]	6	5	3,4	2	1
Rating	High	High	[✓ High]	Mod.	Mod.	Mod.	[✓ Low]	Low
Functional Points	1.0	0.9	[✓ 0.8]	0.7	0.6	0.5	[✓ 0.2]	0.1

Comments: Although the fish habitat rated out high, it should be rated as low due to the lack of pools caused by channelization and damage by livestock. The purpose of the project is to improve fisheries habitat and the riparian corridor

15E. Flood Attenuation and Storage: (applies only to wetlands subject to flooding via in-channel or overbank flow).; If wetlands in AA are not flooded from in-channel or overbank flow, circle NA here and proceed to next function. (see 15L for Dynamic Surface Water Storage)

I. Estimated acreage of jurisdictional wetland I the AA that is subject to periodic flooding (circle points)
Flooded wetlands ≥ 10 acres = 7 pts.
Flooded wetland <10 ac.,>2ac.= 5 pts.
Flooded wetlands ≤ 2ac. = 1 pt.

II. Estimated % of flooded wetland classified as forested (fo), scrub-shrub (ss) or both
> 75% fo/ss = 3 pts.
25-75% fo/ss = 2 pts.
<25% fo/ss = 1 pt.

III. AA contains no outlet or restricted outlet = 1 pt.
AA contains unrestricted outlet = 0 pts.

Score is: ([I ___] x [ii ___]) +(iii ___) = ____   NOT APPLICABLE

Score	22	16-21	14-15	11	8-10	6-7	5-4	3	2	1
Rating	High	High	High	High	Mod.	Mod.	Mod.	Low	Low	Low
Functional Points	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1

Comments: Although wetlands occur along the Kleinschmidt's creek channel, the creek has constant year round flows that rarely change in elevation during spring runoff. Due to the widened channel, no overbank flooding occurs.

15F. Sediment/Nutrient/Toxicant Retention and Removal: (Circle true [T] or false [F] for each of the following statements)

i. [✓ T] F AA receives direct discharge of managed water (municipal or road stormwater, agricultural drainage, industrial/municipal wastewater) or accumulation of sediment/excess nutrients evident (deposits on vegetation, algal mats or other signs of eutrophication present) or immediate upstream land use potential to deliver significant sediment/nutrient loads to AA.
ii. T [✓ F] Evidence of flooding or ponding occurs in AA
iii. T [✓ F] AA contains restricted outlet or no outlet such that flow is slowed or retarded.
iv. [✓ T] F Percent cover of emergent and/or dense woody vegetation in the AA exceeds 50%

Rating of Category: (i) is true and at least two of (ii), (iii), or (iv) are true = ~~High Rating~~
Rating is neither High nor Low = [✓ Moderate Rating]
(I) is false and at least two of (ii), (iii), or (iv) are false = Low Rating

Score	NA	NA	NA
Rating	High	[✓ Mod]	Low
Functional Points	1.0	[✓ 0.5]	0.1

Comments: Although the channel is very shallow in depth, the flow rate increases similar to a riffle and little sediment deposition can occur within the channel.

15G Sediment/Shoreline Stabilization: (applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which has a maximum depth exceeding 5.6 ft. at low water (e.g. subject to wave action). If does not apply, circle NA here and proceed to next function; in items I-iv below, circle choice)

I. Estimated % cover of rooted vegetated component in AA
>30% rooted vegetation = 3 points
10-30% rooted vegetation = 2 points
<10% rooted vegetation = [✓ 1 point]

ii. Water body adjacent to rooted vegetation is
Permanent/Perennial = [✓ 5 points]
Seasonal/ Intermittent = 3 points
Temporary/Ephemeral = 2 points

Score is: (I 1) x (ii 5) = 5

Score	15	10	9	6	4	[✓ 5]	3	2
Rating	High	High	High	Mod.	Mod.	[✓ Mod.]	Low	Low
Functional Points	1.0	0.9	0.8	0.7	0.5	[✓ 0.4]	0.2	0.1

Comments: The banks along the creek within the lower stretch of Kleinschmidt's Creek are very unstable due to livestock usage. Slumping and bank collapse are evident in many locations.

15H. Production Export/Food Chain Support: (Circle appropriate choice in i-iv below)

I. Acreage of vegetated component in AA:
>5 acres = 10 points
1-5 acres = [✓ 5 points]
<1 acre = 1 point

ii. Habitat Diversity Rating: (from #13)
High-Exceptional = 3 points
Moderate = [✓ 2 points]
Low = 1 point

III. Outlet presence:
AA contains an outlet = [✓ 3 points]
AA contains no outlet = 1 point

Iv. Surface water in AA is:
Permanently/Perennial = [✓ 3 points]
Seasonal/Intermittent = 2 points
Temporary/Ephemeral = 1 point

Score is: [(I 5) x (ii 2)] + [(iii 3) x (iv 3)] = 19

Score	39	21-36	[✓ 16-19]	10-14	8-9	7	5-6	4	3	2
Rating	High	High	[✓ High]	Mod.	Mod.	Mod.	Low	Low	Low	Low
Functional Points	1.0	0.9	[✓ 0.8]	0.7	0.6	0.5	0.4	0.3	0.2	0.1

Comments: Runoff from nearby agricultural fields and groundwater seeps provide nutrients to the system in high quantities.

Lower

5I Groundwater Discharge/Recharge: (Check the indicators in i & ii below that apply to the AA)

i.
- X Springs are known or observed
- ___Vegetation growing during dormant season/drought
- ___Wetland occurs at the toe of a natural slope
- X Seeps are present at the wetland edge
- ___AA permanently flooded during drought periods
- ___Wetland contains an outlet, but no inlet
- ___Other

ii.
- ___Permeable substrate present without underlying impeding layer
- ___Wetland contains inlet but no outlet
- ___Other

Rating for Discharge(D)/Recharge(R) Properties:
AA is known D/R area or one or more indicators of D/R present [✓ = High]
No D/R indicators present = Low
Available D/R information inadequate to rate AA D/R potential = Unkn

Score	NA	NA	NA
Rating	[✓ High]	Low	Unknown
Functional Points	[✓ 1.0]	0.1	NA

Comments: Due to the presence of springs and groundwater seeps along the Spring Creek channel the area has a high groundwater discharge value.

5J. Uniqueness:

i. Estimated relative abundance of similarly classified sites within the Major Watershed Basin (#11, circle)
Rare = 3 points
Common = 2 points
Abundant [✓ = 1 point]

ii. Replacement potential/habitat diversity (#13, circle points)
AA is/contains fen, bog, warm springs or mature (>80 yr)forested wetland = 10 points
AA does not contain above cited types but diversity is high-exceptional = 3 points
AA does not contain above types and habitat diversity is low-moderate [✓ = 1 point]

iii. Condition of AA: (from #12, circle) Undisturbed = 3 pts. Encroached = 2 pts. Directly Disturbed = 1 pt.
Score is [(i 1) x (ii 1)] + (iii) = 2

Score	33	31-32	22-23	12-21	10-11	8-9	5,6,7	4	[✓ 2-3]	1
Rating	High	High	High	High	Mod.	Mod.	Mod.	Low	[✓ Low]	Low
Functional Points	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	[✓ 0.2]	0.1

Comments: A number of similar spring creek sites exist within the Blackfoot Valley.

5K. Recreation/Education Potential: i. Is the AA a known rec./ed. site: (circle) Y [✓ N] (If yes, rate as High and go to ii; if no go to iii)
ii. Check categories that apply to the AA: ___ Educational/scientific study; ✓ Consumptive rec.; ___ Non-consumptive rec.; ___Other
iii. Based on the location, diversity, size, and other site attributes, is there strong potential for rec./ed. use? Y [✓ N]
(If yes, go to ii, then proceed to iv; if no, then rate as Low [0.1])
iv. Condition of AA: (from #12, circle points) Undisturbed = 3 pts; Encroached upon = 2 pts.; Directly Disturbed [✓ = 1 pt.]
v. Ownership of AA: (circle points) Public = 2 points; Private [✓ = 1 point]
Score is: (iv 1) x (v 1) = 1

Score	6	4	3	2	[✓ 1]
Rating	High	Mod.	Mod.	Low	[✓ Low]
Functional Points	1.0	0.7	0.5	0.3	[✓ 0.1]

Comments: The lower end at the spring creek has very little potential for recreation and/or education as it is primarily a shallow riffle with little opportunity for fishing/hunting.

5L. Dynamic Surface Water Storage: (Applies to wetlands that do not flood from overbank or in-channel flow, but flood via precipitation, land surface flow, or groundwater flow. If no jurisdictional wetlands in the AA are subject to flooding, circle NA here and proceed with the evaluation.)

i. Estimated acreage of jurisdictional wetland in the AA subject to periodic flooding (circle points)
Flooded wetlands ≥ 5 acres = 3 points
5 acres > flooded wetland > 1 acre [✓ = 2 points]
Flooded wetlands < 1 acre = 1 point

ii. Estimated flood frequency (circle points)
Wetland floods ≥ 5/10 years = 2 points
Wetland floods < 5/10 years = [✓ 1 point]

Score is (I 2) x (II 1) = 2

Score	6	4	[✓ 2,3]	1	0.5
Rating	High	High	[✓ Mod.]	Low	Low
Functional Points	1.0	0.8	[✓ 0.5]	0.3	0.1

Comments: Due to the presence of springs and seeps in various locations along the corridor of the creek a moderate rating for water storage is practical for the small wetland areas adjacent to Kleinschmidt Creek.

Lower

FUNCTION & VALUE SUMMARY & OVERALL RATING

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units; (Actual Points x Estimated AA Acreage)
A. Listed/Proposed/Candidate T&E Species Habitat	LOW	0.2	1	0.2 x 10.4 = 2.08
B. MT Natural Heritage Program Species Habitat	LOW	0.1	1	0.1 x 10.4 = 1.04
C. General Wildlife Habitat	MODERATE	0.5	1	0.5 x 10.4 = 5.2
D. General Fish/Aquatic Habitat	LOW	0.2	1	0.2 x 10.4 = 2.08
E. Flood Attenuation and Storage	N/A	N/A	N/A	Not Applicable
F. Sediment/Nutrient/Toxicant Removal	MODERATE	0.5	1	0.5 x 10.4 = 5.2
G. Sediment/Shoreline Stabilization	MODERATE	0.4	1	0.4 x 10.4 = 4.16
H. Production Export/Food Chain Support	HIGH	0.8	1	0.8 x 10.4 = 8.32
I. Groundwater Discharge/Recharge	HIGH	1.0	1	1.0 x 10.4 = 10.4
J. Uniqueness	LOW	0.2	1	0.2 x 10.4 = 2.08
K. Recreation/Education Potential	LOW	0.1	1	0.1 x 10.4 = 1.04
L. Dynamic Surface Water Storage	MODERATE	0.5	1	0.5 x 10.4 = 5.2
Totals:		4.5	11	TOTAL = 46.8

4.5 ÷ 11 = 41%

OVERALL ANALYSIS AREA (AA) RATING: (Circle appropriate category based on the criteria outlined below) I II [✓ III] IV

Category I Wetland: (Must satisfy [redacted] of the following criteria; [redacted])
- No Score of 0.9 or 1 functional point for Listed/Proposed/Candidate Threatened or Endangered Species; or
- No Score of 0.9 or 1 functional point for Uniqueness or "High" rating for Uniqueness and Condition (#12) is "Undisturbed" ; or
- No Score of 1 functional point for Flood Attenuation and Storage and answer to Question [redacted] is "yes"; or
- No Total actual functional points > 80% (round to nearest whole #) of total possible functional points.

Category II Wetland: (Criteria for Category I not satisfied [redacted]
- No Score of 1 functional point for Species Rated S1, S2, or S3 by the MT Natural Heritage Program; or
- No Score of 1 functional point for General Wildlife Habitat; or
- No "High" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or
- No "High" rating for Uniqueness or
- No Total Actual Functional Points > 65% (round to nearest whole #) of total possible functional points.

Category III Wetland: (Criteria for Categories I, II or IV not satisfied; [redacted]) 41%

Category IV Wetland: (Criteria for Categories I or II are not satisfied [redacted]
- Yes "Low" rating for Uniqueness; [redacted]
- High "Low" rating for Production Export/Food Chain Support; [redacted]
- No Total actual functional points < 30% (round to nearest whole #) of total possible functional points

Montana Wetland Field Evaluation Form (revised 9/23/1997, DRAFT)

1. Project Name: Kleinschmidt Creek Restoration Upper End 2. Project #: ________ & Control #: ________

3. Evaluation Date: Mo. 10 Day 14 Yr. 98 4. Evaluator(s): L. Urban / S. Althof - MDT Marilyn Marler - USFWS consultant 5. Wetlands/Site #(s) Upper End

6. Wetland Location(s): i. Legal: Twnshp. 14 [✓ N] or S; Range 11 E or [✓ W] Section 5 ; ¼ S. ____ ; ¼¼S. ____ ; ¼¼¼S. ____

ii. Geographic: Latitude: Degrees ____ ; Min. ____ ; Sec. ____ ; Longitude: Degrees ____ Min. ____ ; Sec. ____

iii. UTM: ________ iv. Watershed: 1 7 0 1 0 2 0 3 GPS Reference No.: ________

Access Description: Property owned by Mr. Tom Rue. Access by permission only. Site is directly adjacent to the south of

7. a. Evaluating Agency: MDT / USFWS ;
b. Purpose of Evaluation:
1. ____ Wetlands potentially affected by MDT project
2. X Mitigation wetlands; pre-construction
3. ____ Mitigation wetlands; post-construction
4. ____ Other

8. Wetland size: (total acres) 4.5 (visually estimated) __.__ (measured, e.g. by GPS)

9. Assessment area: (AA,tot., ac., see instructions on determining AA) 10.0 (visually estimated) 12.9 (measured, e.g. by GPS)

10. Classification of AA (HGM according to Brinson, first column; USFWS according to Cowardin[1979], remaining columns)

HGM Class	System	Subsyst	Class	Water Regime	Modifier	Dominance Type	% of AA
Riverine	Riverine	Lower perennial	UB	Permanently Flooded	—	Potamogeton sp., Myriophyllum	32
Riverine	Riverine	Lower perennial	EM	Permanently Flooded	—	Carex nebrascensis, Sparganium sp. Juncus balticus	10
Riverine	Palustrine	—	EM	Semi-permanently Flooded	—	Carex nebrascensis, Juncus balticus, Phalaris arundinacea,	43
UPLAND						Spotted Knapweed, Canada Thistle, western wheatgrass, crops	15

Abbreviations: System: Palustrine(P)/ Subsyst.: none/ Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)/ System: Lacustrine (L)/, Subsyst.: Limnetic (2)/ Classes: RB, UB, AB/ Subsystem: Littoral (4)/ Classes: RB, UB, AB, US, EM/ System: Riverine (R)/ Subsyst.: Lower Perennial (2)/ Classes: RB, UB, AB, US, EM/ Subsystem: Upper Perennial (3)/ Classes: RB, UB, AB, US/ Water Regimes: Intermittently Exposed (G), Semipermanently Flooded (F), Seasonally Flooded (C), Temporarily Flooded (A), Intermittently Flooded (J)

1. Estimate relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)
(Circle one) Unknown Rare Common [✓ Abundant]
Comments: Other spring fed streams and wetlands of this type are found throughout the Blackfoot Valley

2. General condition of AA:
i. Regarding disturbance: (circle one, see definitions) Undisturbed Encroached Upon [✓ Directly Disturbed]
Comments: (types of disturbance, intensity, season, etc.): Heavy grazing pressure by livestock (horses)
ii. Weedy, alien, & introduced species (including those not domesticated, feral): (list) Spotted Knapweed, Canada thistle, reed canary grass

3. Habitat Diversity: (count only the number of different "Cowardin" types occurring at level of water regime [equal NWI classes, #10 above])
i. Number of NWI classes w/ persistent vegetation: (circle points) ≥3 classes = 5 pts. 2 classes = 3 pts. [✓ ≤ 1class = 1 pt.]
ii. Open water in the AA: (circle one) present [✓ = 2 pts.] absent = 1 pt.
Score is: (i 1) x (ii 2) = 2

Score	10	5-8	[✓ 2-3]	1
Rating	Exceptional	High	[✓ Moderate]	Low
Functional Points	NA	NA	NA	NA

Comments: Although two different emergent wetland systems are present, the vegetative community dominants are similar.

4. Provide brief descriptive summary of AA & surrounding land use and habitat: The AA is a riparian corridor associated with a Spring Creek (Kleinschmidt's) that is composed of uplands, emergent wetlands and the creek. Areas directly adjacent to the corridor are hay fields and tilled agricultural [illegible]

UPPER

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

15A. Habitat for Federally Listed, Proposed, or Candidate Threatened or Endangered Plants or Animals:

AA is Documented (D) or Suspected (S) to receive (circle one):
Regular use or is designated critical habitat (list species) D S
Occasional (infrequent, sporadic) use (list species) D S
Incidental (chance, inconsequential) use (list species) [✓ D] S westslope cutthroat trout, Bull trout, Bald eagles
No use D [✓ S] Grizzly BEAR

Highest Level Use:	doc./reg.	doc./occ.	sus./reg.	sus./occ.	[✓ doc./incid.]	sus./incid.	None
Rating	High	High	Moderate	Moderate	[✓ Low]	Low	None
Functional Points	1.0	0.8	0.7	0.6	[✓ 0.2]	0.1	0.0

Sources for documented use (e.g. observations, records, etc.) USFWS / MFWP personnel indicate that the spring creek may be utilized by these fish, but only incidentally. It is anticipated that improvement to the habitat will increase the suitability of the spring creek for these species. Bald eagles use the creek in winter

15B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in15A above)

AA is Documented (D) or Suspected (S) to receive (circle one):
Regular use (list species) D S
Occasional (infrequent, sporadic) use (list species) D S
Incidental (chance, inconsequential) use (list species) D [✓ S] Common loon, black tern, Hutchinsia procumbens, Colombian Sharptailed grouse
No use D S

Highest Level Use:	doc./reg.	doc./occ.	sus./reg.	sus./occ.	doc./incid.	[✓ sus./incid]	None
Rating	High	High	Moderate	Moderate	Low	[✓ Low]	None
Functional Points	1.0	0.8	0.7	0.6	0.2	[✓ 0.1]	0.0

Sources for documented use (e.g. observations, records, etc.) The MNHP identified several species utilizing areas to the east and south of the project area. It is unlikely that these species utilize this area except by chance. The Hutchinsia procumbens was not identified within the project corridor

15C. General Wildlife Habitat Rating: (Circle appropriate response; AA is verified [V] or suspected [S] to receive substantial [S] moderate [M], or negligible to no use [N]; [see definitions for these terms] by the listed wildlife groups (see definitions for aquatic/semi-aquatic & non-aquatic wildlife)

Aquatic/semi-aquatic birds (list examples) [✓ V] or S [✓ S], M, or N mallard, wigeon, teal, bufflehead, pintail, Kingfisher
Non-aquatic birds (list examples) V or [✓ S] S, [✓ M] or N American robin, blackbirds, swallows
Aquatic/semi-aquatic mammals (list ex.) [✓ V] or S, [✓ S], M, or N muskrats
Non-aquatic mammals (list ex.) V or [✓ S] S, M, or [✓ N] Deer, elk, coyote, fox
Aquatic/semi aquatic reptiles (list ex.) V or [✓ S] S, M, or [✓ N] None
Non-aquatic reptiles (list ex.) V or [✓ S] S, M, or [✓ N] None
Amphibians (list examples) [✓ V] or S S, [✓ M] or N Leopard frog, Spotted frog
Invertebrates (list examples) [✓ V] or S [✓ S], M, or N mayfly, caddis, dragonfly, freshwater shrimp, snails

i. Assessed Wildlife Use (circle points):
≥3 s's or ≥5 m's + s's [✓ = 7 pts.]
1-2 s's or 2-4 m's = 3 pts.
No s's and < 2 m's = 1 pt.

ii. Habitat Diversity from # 13 (circle points)
High to exceptional rating [✓ ~~= 3 pts.~~]
Moderate rating [✓ = 2 pts.]
Low rating = 1 pt.

Score is: (i 7) x (ii 2) = ____

Score	21	[✓ 14]	9	7	[✓ 6]	3	2	1
Rating	High	[✓ High]	High	High	[✓ Mod.]	Mod.	Low	Low
Functional Points	1.0	[✓ 0.9]	0.8	0.7	[✓ 0.5]	0.4	0.3	0.1

Comments: The area is heavily utilized by waterfowl species but there is little sign of terrestrial wildlife usage due to heavy livestock pressure. The wildlife rating should be moderate due to the lack of cover, and overgrazed condition of the riparian corridor

15D. General Fish Habitat Rating: (If AA does not contain, or is not connected to, a fish-bearing stream or standing water body [e.g. pond or lake], circle NA here and proceed to the next function)

i. AA is verified (V) or suspected (S) to support listed groups for portions of their life cycle (circle points)
Native fish V or S = 5 pts.
Introduced game fish [✓ V] or S [✓ ~~= 3 pts.~~]
Introduced non-game fish V or S ~~= 2 pts.~~
No fish V or S = 1 pt.

ii. Surface water in AA is (circle points):
Permanent/perennial [✓ = 3 pts.]
Seasonal/intermittent = 2 pts.
Temporary/ephemeral = 1 pt.

Score is: (I 3) x (II 3) = 9

Score	15	10	[✓ 9]	6	5	3,4	[✓ 2]	1
Rating	High	High	[✓ High]	Mod.	Mod.	Mod.	[✓ Low]	Low
Functional Points	1.0	0.9	[✓ 0.8]	0.7	0.6	0.5	[✓ 0.2]	0.1

Comments: Although the fish habitat rating was high the spring creek is in poor condition. Therefore, the purpose is to improve the habitat to make it suitable for both cutthroat and bull trout.

15E. Flood Attenuation and Storage: (applies only to wetlands subject to flooding via in-channel or overbank flow).; If wetlands in AA are not flooded from in-channel or overbank flow, circle NA here and proceed to next function. (see 15L for Dynamic Surface Water Storage)

i. Estimated acreage of jurisdictional wetland i the AA that is subject to periodic flooding (circle points)
Flooded wetlands ≥ 10 acres = 7 pts.
Flooded wetland <10 ac.,>2ac.= 5 pts.
Flooded wetlands ≤ 2ac. = 1 pt.

ii. Estimated % of flooded wetland classified as forested (fo), scrub-shrub (ss) or both
> 75% fo/ss = 3 pts.
25-75% fo/ss = 2 pts.
<25% fo/ss = 1 pt.

iii. AA contains no outlet or restricted outlet = 1 pt.
AA contains unrestricted outlet = 0 pts.

Score is: ([i ___] x [ii ___]) +(iii ___) = ____

NOT Applicable

Score	22	16-21	14-15	11	8-10	6-7	5-4	3	2	1
Rating	High	High	High	High	Mod.	Mod.	Mod.	Low	Low	Low
Functional Points	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1

Comments: The spring creek has constant year round flows, therefore it is rarely subject to overbank flows. The Kleinschmidt creek elevation during spring runoff may raise a maximum of 1 foot, but due to widened channel no flooding occurs.

15F. Sediment/Nutrient/Toxicant Retention and Removal: (Circle true [T] or false [F] for each of the following statements)

i. [✓ T] F AA receives direct discharge of managed water (municipal or road stormwater, agricultural drainage, industrial/municipal wastewater) or accumulation of sediment/excess nutrients evident (deposits on vegetation, algal mats or other signs of eutrophication present) or immediate upstream land use potential to deliver significant sediment/nutrient loads to AA.
ii. T [✓ F] Evidence of flooding or ponding occurs in AA
iii. [✓ T] F AA contains restricted outlet or no outlet such that flow is slowed or retarded.
iv. [✓ T] F Percent cover of emergent and/or dense woody vegetation in the AA exceeds 50%

Rating of Category:
(i) is true and at least two of (ii), (iii), or (iv) are true = [✓ High Rating]
Rating is neither High nor Low = Moderate Rating
(i) is false and at least two of (ii), (iii), or (iv) are false = Low Rating

Score	NA	NA	NA
Rating	[✓ High]	Mod.	Low
Functional Points	[✓ 1.0]	0.5	0.1

Comments: In the upper end of the channel where the creek widens to 75+ feet in width, the channel is very shallow and there is evidence of silt deposition due to upstream activities

15G Sediment/Shoreline Stabilization: (applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which has a maximum depth exceeding 6.6 ft. at low water (e.g. subject to wave action). If does not apply, circle NA here and proceed to next function; in items i-iv below, circle choice)

i. Estimated % cover of rooted vegetated component in AA
>30% rooted vegetation = 3 points
10-30% rooted vegetation = 2 points
<10% rooted vegetation = [✓ 1 point]

ii. Water body adjacent to rooted vegetation is
Permanent/Perennial = [✓ 5 points]
Seasonal/ Intermittent = 3 points
Temporary/Ephemeral = 2 points

Score is: (i 1) x (ii 5) = 5

Score	15	10	9	6	4	[✓ 5]	3	2
Rating	High	High	High	Mod.	Mod.	[✓ Mod.]	Low	Low
Functional Points	1.0	0.9	0.8	0.7	0.5	[✓ 0.4]	0.2	0.1

Comments: There appears to be little vegetative stabilization along the banks due to grazing by livestock. Slumping and bank collapse is evident in many areas where the channel is incized and undercut.

15H. Production Export/Food Chain Support: (Circle appropriate choice in i-iv below)

i. Acreage of vegetated component in AA:
>5 acres = 10 points
1-5 acres = [✓ 5 points]
<1 acre = 1 point

iii. Outlet presence:
AA contains an outlet = [✓ 3 points]
AA contains no outlet = 1 point

ii. Habitat Diversity Rating: (from #13)
High-Exceptional = 3 points
Moderate = [✓ 2 points]
Low = 1 point

iv. Surface water in AA is:
Permanently/Perennial = [✓ 3 points]
Seasonal/Intermittent = 2 points
Temporary/Ephemeral = 1 point

Score is: [(i 5) x (ii 2)] + [(iii 3) x (iv 3)] = 19

Score	39	21-38	[✓ 16-19]	10-14	8-9	7	5-6	4	3	2
Rating	High	High	[✓ High]	Mod.	Mod.	Mod.	Low	Low	Low	Low
Functional Points	1.0	0.9	[✓ 0.8]	0.7	0.6	0.5	0.4	0.3	0.2	0.1

Comments: As the area is vegetated around the perimeter of the spring creek and spring seeps enter the system nutrients do enter the system. Upstream of the site the creek flows through a feedlot which contributes to the sediment deposition in the creek

UPPER

5I. Groundwater Discharge/Recharge: (Check the indicators in i & ii below that apply to the AA)

i.
X Springs are known or observed
___Vegetation growing during dormant season/drought
___Wetland occurs at the toe of a natural slope
X Seeps are present at the wetland edge
___AA permanently flooded during drought periods
___Wetland contains an outlet, but no inlet
___Other

ii.
___Permeable substrate present without underlying impeding layer
___Wetland contains inlet but no outlet
___Other

Rating for Discharge(D)/Recharge(R) Properties:
AA is known D/R area or one or more indicators of D/R present [✓ = High]
No D/R indicators present = Low
Available D/R information inadequate to rate AA D/R potential = Unkn

Score	NA	NA	NA
Rating	[✓ High]	Low	Unknown
Functional Points	[✓ 1.0]	0.1	NA

Comments: A Number of seeps and springs were observed up and down the spring creek and within the surrounding wetland areas

5J. Uniqueness:

i. Estimated relative abundance of similarly classified sites within the Major Watershed Basin (#11, circle)
Rare = 3 points
Common = 2 points
[✓ Abundant = 1 point]

ii. Replacement potential/habitat diversity (#12, circle points)
AA is/contains fen, bog, warm springs or mature (>80 yr)forested wetland = 10 points
AA does not contain above cited types but diversity is high-exceptional = 3 points
AA does not contain above types and habitat diversity is low-moderate [✓ = 1 point]

iii. Condition of AA: (from #12, circle) Undisturbed = 3 pts. Encroached = 2 pts. Directly Disturbed [✓ = 1 pt.]
Score is [(i 1) x (ii 1)] + (iii) = 2

Score	33	31-32	22-23	12-21	10-11	8-9	5,6,7	4	[✓ 2-3]	1
Rating	High	High	High	High	Mod.	Mod.	Mod.	Low	[✓ Low]	Low
Functional Points	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	[✓ 0.2]	0.1

Comments: It is apparent That other Systems of This type are abundant within The Blackfeet Valley. Therefore it is not unique.

5K. Recreation/Education Potential: i. Is the AA a known rec./ed. site: (circle) Y [✓ N] (If yes, rate as High and go to ii; if no go to iii)
ii. Check categories that apply to the AA: ___ Educational/scientific study; ✓ Consumptive rec.; ___ Non-consumptive rec.; ___Other
iii. Based on the location, diversity, size, and other site attributes, is there strong potential for rec./ed. use? Y [✓ N]
(If yes, go to ii, then proceed to iv; if no, then rate as Low [0.1])
iv. Condition of AA: (from #12, circle points) Undisturbed = 3 pts; Encroached upon = 2 pts.; Directly Disturbed [✓ = 1 pt.]
v. Ownership of AA: (circle points) Public = 2 points; Private [✓ = 1 point]
Score is: (iv 1) x (v 1) = 1

Score	6	4	3	2	[✓ 1]
Rating	High	Mod.	Mod.	Low	[✓ Low]
Functional Points	1.0	0.7	0.5	0.3	[✓ 0.1]

Comments: Although some duck hunting occurs within This section of Kleinschmidt's Spring Creek, the surrounding land is private and The close proximity of US Highway 200 limit hunting usage. Fishing is rare. Therefore it has a low recreation/education potential.

5L. Dynamic Surface Water Storage: (Applies to wetlands that do not flood from overbank or in-channel flow, but flood via precipitation, and surface flow, or groundwater flow. If no jurisdictional wetlands in the AA are subject to flooding, circle NA here and proceed with the evaluation.)

i. Estimated acreage of jurisdictional wetland in the AA subject to periodic flooding (circle points)
Flooded wetlands ≥ 5 acres = 3 points
5 acres > flooded wetland > 1 acre [✓ = 2 points]
Flooded wetlands < 1 acre = 1 point

ii. Estimated flood frequency (circle points)
Wetland floods ≥ 5/10 years = [✓ 2 points]
Wetland floods < 5/10 years = 1 point

Score is (i 2) x (ii 2) = 4

Score	6	[✓ 4]	2,3	1	0.5
Rating	High	[✓ High]	Mod.	Low	Low
Functional Points	1.0	[✓ 0.8]	0.5	0.3	0.1

Comments: Due To The springs and seeps found throughout The AA, The surface water storage capacity is high due to The spongy nature of The soils.

urrcn

FUNCTION & VALUE SUMMARY & OVERALL RATING

F tion & Value Variables	Rating	Actual Functional Points	Possible Function al Points	Functional Units; (Actual Points x Estimated AA Acreage)
A. Listed/Proposed/Candidate T&E Species Habitat	LOW	0.2	1	0.2 × 12.9 = 2.58
B. MT Natural Heritage Program Species Habitat	LOW	0.1	1	0.1 × 12.9 = 1.29
C. General Wildlife Habitat	MODERATE	0.5	1	0.5 × 12.9 = 6.45
D. General Fish/Aquatic Habitat	LOW	0.2	1	0.2 × 12.9 = 2.58
E. Flood Attenuation and Storage	N/A	N/A	—	
F. Sediment/Nutrient/Toxicant Removal	HIGH	1.0	1	1.0 × 12.9 = 12.9
G. Sediment/Shoreline Stabilization	MODERATE	0.4	1	0.4 × 12.9 = 5.16
H. Production Export/Food Chain Support	HIGH	0.8	1	0.8 × 12.9 = 10.32
I. Groundwater Discharge/Recharge	HIGH	1.0	1	1.0 × 12.9 = 12.9
J. Uniqueness	LOW	0.2	1	0.2 × 12.9 = 2.58
K. Recreation/Education Potential	LOW	0.1	1	0.1 × 12.9 = 1.29
L. Dynamic Surface Water Storage	HIGH	0.8	1	0.8 × 12.9 = 10.3
Totals:		5.3	11	Total: 68.3

5.3 ÷ 11 = 48%

V LL ANALYSIS AREA (AA) RATING: (Circle appropriate category based on the criteria outlined below) I II [✓ III] IV

Category I Wetland: (Must satisfy [redacted] of the following criteria; [redacted])
No Score of 0.9 or 1 functional point for Listed/Proposed/Candidate Threatened or Endangered Species; or
No Score of 0.9 or 1 functional point for Uniqueness or "High" rating for Uniqueness and Condition (#12) is "Undisturbed" ; or
No Score of 1 functional point for Flood Attenuation and Storage and answer to Question [redacted] is "yes"; or
No Total actual functional points > 80% (round to nearest whole #) of total possible functional points. 48%

Category II Wetland: (Criteria for Category I not satisfied [redacted]
No Score of 1 functional point for Species Rated S1, S2, or S3 by the MT Natural Heritage Program; or
No Score of 1 functional point for General Wildlife Habitat; or
No "High" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or
No "High" rating for Uniqueness or
No Total Actual Functional Points > 65% (round to nearest whole #) of total possible functional points. 48%

Category III Wetland: (Criteria for Categories I, II or IV not satisfied; [redacted]) X

Category IV Wetland: (Criteria for Categories I or II are not satisfied [redacted]
Yes "Low" rating for Uniqueness; [redacted]
No "Low" rating for Production Export/Food Chain Support; [redacted]
No Total actual functional points < 30% (round to nearest whole #) of total possible functional points

MONTANA NATURAL HERITAGE PROGRAM
1515 East Sixth Avenue
Helena, Montana 59620
(406) 444-3009

October 21, 1998

Marilyn Marler
1951 South 12th West
Missoula, Montana 59801

Dear Marilyn,

I am writing in response to your request for information on species of special concern in the vicinity of T14N, R11W, Sec. 5 of Powell County. We checked our databases for information in this general area and have enclosed 7 species of concern reports, 1 map and explanatory material.

Please keep in mind the following when using and interpreting the enclosed information and maps:

(1) These materials are the result of a search of our database for species of concern that occur in an area defined by a circle centered on the requested township, range and section location with a five-mile radius surrounding the requested location. This is done to provide you with a more inclusive set of records and to capture records that may be immediately adjacent to the requested area.

(2) In the report, the term "precision" reflects the quality of the location information. S (second) precision is used when the location of the collection/observation is known within a three-second radius (approximately 10 acres); M (minute) precision is used when the location of the collection /observation is known within a one minute radius (approximately 1.5 miles); and G (general) precision is used when the location of the record/collection is known within a 5 mile radius or to a place name only. Some species locations outside the selection area have imprecisely-known locations and may actually occur within the selection area.

(3) Location information for animals represents occupied breeding habitat; location information for plants represents known occurrences of plant species, and, like animals, has an implied range that may not be fully conveyed by the mapped data. Most locations are depicted as points, but some, especially those that cover large area, are depicted as polygons on the map. The approximate boundaries of these polygons are color-coded to help differentiate vertebrate classes and plants.

(4) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.

(5) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately-owned lands, and approval by the landowner is advisable if specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.

(6) The results of a data search by the Montana Natural Heritage Program Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys which may be required for environmental assessments.

Electronic access to the Montana Natural Heritage Program is available at URL
http://nris.state.mt.us/mtnhp/

The Nature Conservancy and Montana State Library

October 21, 1998

Montana Natural Heritage Program
Species of Special Concern: T14N R11W in Powell County
Prepared for USFWS Wetland Assessment – Marilyn Marler

Scientific Name: GAVIA IMMER
Common Name: COMMON LOON

Global rank: G5
Forest Service status: SENSITIVE
State rank: S1S2B,SZN
Federal Status:

Element occurrence code: ABNBA01030.071
Element occurrence type:

Survey site name: KLEINSCHMIDT LAKE
EO rank:
EO rank comments:

County: POWELL

USGS quadrangle: BROWNS LAKE

Township:	Range:	Section:	TRS comments:
014N	011W	18	7

Precision: M
Survey date:
First observation:
Last observation: 1995-07-15
Elevation: 4182
Slope/aspect:
Size (acres): 0

Location:
FROM OVANDO GO SOUTH ON COUNTY ROAD CA. 7 MILES TO JCT, THEN EAST TO BROWNS LAKE, THEN NORTH ON GATED, PRIVATE ROAD CA. 2 MILES TO KLEINSCHMIDT LAKE.

Element occurrence data:
MONTANA LOON MANAGEMENT PLAN - TYPE B LAKE. PRE-1984 NESTING RECORDS AND/OR OCCUPIED DURING BREEDING SEASON POST-1984.

General site description:
UNKNOWN.

Land owner/manager:
KLEINSCHMIDT LAKE WATERFOWL PRODUCTION AREA
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)
KLEINSCHMIDT LAKE WILDLIFE HABITAT PROTECTION AREA

Comments:
NONE.

Information source: SKAAR, DON. 411 WEST BUSH, LIBBY, MT 59923.
406/293-9496; 293-4161.

Specimens:

October 21, 1998

Montana Natural Heritage Program
Species of Special Concern: T14N R11W in Powell County
Prepared for USFWS Wetland Assessment – Marilyn Marler

Scientific Name: HALIAEETUS LEUCOCEPHALUS
Common Name: BALD EAGLE

Global rank: G4 Forest Service status: THREATENED
State rank: S3B,S3N Federal Status: LTLE

Element occurrence code: ABNKC10010.155
Element occurrence type:

Survey site name: DONEY
EO rank:
EO rank comments: CURRENT.

County: POWELL

USGS quadrangle: OVANDO MOUNTAIN

Township:	Range:	Section:	TRS comments:
015N	011W	30	

Precision: M
Survey date: Elevation: 4300
First observation: 1993 Slope/aspect:
Last observation: 1997 Size (acres):

Location:
CA. 4-5 MILES EAST OF OVANDO, NORTH OF STATE HWY 200.

Element occurrence data:
RESULTS OF ANNUAL NEST SURVEYS ON FILE AT MTNHP.

General site description:
NEST SITE AND TERRITORY.

Land owner/manager:
CORPORATE TIMBERLANDS
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

Information source: FLATH, D. 1997. [MEMO LISTING LOCATION OF BALD EAGLE NESTS AS OF AUGUST, 1997.] UNPUBLISHED REPORT. 10PP.

Specimens:

October 21, 1998

Montana Natural Heritage Program
Species of Special Concern: T14N R11W in Powell County
Prepared for USFWS Wetland Assessment – Marilyn Marler

Scientific Name: CHLIDONIAS NIGER
Common Name: BLACK TERN

Global rank: G4 Forest Service status:
State rank: S3B,SZN Federal Status:

Element occurrence code: ABNNM10020.001
Element occurrence type:

Survey site name: BLACKFOOT WPA
EO rank:
EO rank comments:

County: POWELL

USGS quadrangle: MARCUM MOUNTAIN

Township:	Range:	Section:	TRS comments:
014N	011W	15	

Precision: M
Survey date:
First observation: 1979
Last observation: 1993-07-23

Elevation: 4300
Slope/aspect:
Size (acres):

Location:
NEWLY DEVELOPED WATERFOWL PRODUCTION AREA ON SOUTHWEST SIDE OF SR 200, CA. 2 MILES NORTHWEST OF JUNCTION WITH SR 141.

Element occurrence data:
1993: 30-50 BIRDS OBSERVED, DOING TERRITORIAL CALLS. 1988: BIRDS OBSERVED NESTING.

General site description:
MARSHY AREA WITH SEVERAL LARGE, OPEN PONDS.

Land owner/manager:
BLACKFOOT WATERFOWL PRODUCTION AREA
CONSERVATION EASEMENT: THE NATURE CONSERVANCY

Comments:
NESTING AREA NOT SEEN, BUT LIKELY IN VICINITY. SUITABLE HABITAT AT BROWNS LAKE, CA. 1 MILE TO WEST. SURVEYED BY J. REICHEL IN 1993. THIS WPA WAS REFERRED TO AS TWO SEPARATE AREAS, MCCORMICK WPA AND NORTH FORK WPA, BY BENTON LAKE NWR STAFF IN 1988.

Information source: ZOOLOGIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, P.O. BOX 210800, HELENA, MT 59620-1800. 406/444-3009.

Specimens:

October 21, 1998

Montana Natural Heritage Program
Species of Special Concern: T14N R11W in Powell County
Prepared for USFWS Wetland Assessment – Marilyn Marler

Scientific Name: URSUS ARCTOS HORRIBILIS
Common Name: GRIZZLY BEAR

Global rank: G4T3 Forest Service status: THREATENED
State rank: S1S2 Federal Status: LTNL

Element occurrence code: AMAJB01021.008
Element occurrence type: OCCUPIED HABITAT

Survey site name: NORTHERN CONTINENTAL DIVIDE
EO rank:
EO rank comments:

County: FLATHEAD
GLACIER
PONDERA
TETON
LEWIS AND CLARK
POWELL
MISSOULA
LAKE

USGS quadrangle:

Township: Range: Section: TRS comments:

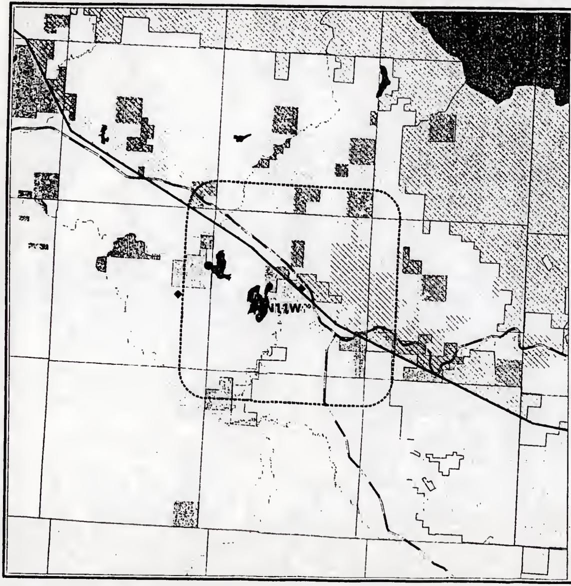
Precision: U
Survey date: Elevation: 3200 - 10400
First observation: Slope/aspect:
Last observation: Size (acres):

Location:
THIS RECORD ENCOMPASSES AN AREA FROM CANADA SOUTH TO STATE HIGHWAY 200, AND FROM EAST FRONT TO SWAN AND STILLWATER RIVERS.

Element occurrence data:
OCCUPIED HABITAT. THIS OCCURRENCE IS APPARENTLY SEPARATED FROM THAT IN THE MISSION MOUNTAINS TO THE EAST AND BECOMING ISOLATED FROM POPULATIONS IN CANADA TO THE NORTH. THE POPULATION IS ESTIMATED AT 549-813 BEARS WITH A MINIMUM OF 306 BEARS (INCLUDING THE MISSION MOUNTAINS PORTION), ACCORDING TO THE U.S. FISH AND WILDLIFE SERVICE. FROM 1987-1992, THE AVERAGE KNOWN HUMAN-CAUSED MORTALITY WAS 11.3 BEARS/YEAR, ACCORDING TO THE U.S. FISH AND WILDLIFE SERVICE.

General site description:
GRIZZLIES USE A WIDE RANGE OF HABITATS, FROM LOW-ELEVATION RIPARIAN AREAS TO ALPINE AND TALUS SLOPES.

Land owner/manager:
SCAPEGOAT WILDERNESS
BOB MARSHALL WILDERNESS
GREAT BEAR WILDERNESS
GLACIER NATIONAL PARK
FLATHEAD NATIONAL FOREST
LEWIS & CLARK NATIONAL FOREST
HELENA NATIONAL FOREST
LOLO NATIONAL FOREST



Montana Species of Special Concern
USFWS Wetland Assessment
T14N R11W of Powell County

Species Data

Point Locations
- ◆ Animal
- ● Plant

Populations covering large areas
- □ Birds
- □ Mammals
- ▭ Fluvial Occurrences (Fish, Birds, &/or Herps)

Managed Areas

- ▨ Tribal Lands
- □ BLM special areas
- □ Other BLM Lands
- □ National Park Service
- ▨ US Fish & Wildlife Service
- □ National Forests
- ■ Wilderness areas
- ▨ Research Natural Areas
- ▨ State Trust Lands
- □ MT Fish, Wildlife & Parks
- ▨ Private preserves & conservation easements

------ Search Area

NOTE: Additional species locations occur in this area but are not displayed due to their sensitive nature.

- Species locations depicted outside the search area have imprecisely-known locations and may actually occur within the search area.
- Not all legend items may occur on map.
- This map displays management status, which may differ from ownership.
- Features shown on this map do not imply public access to any lands.
- Refer to accompanying documentation for full explanation of map features.

Scale of Miles 0 2 4 6 8 10

Request marler1
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Montana State Library
NRIS Natural Resource Information System
Montana Natural Heritage Program